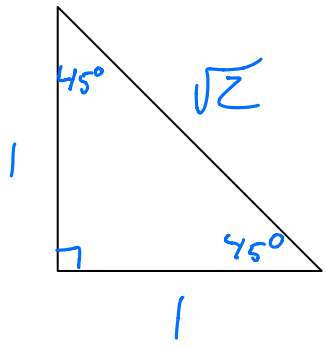
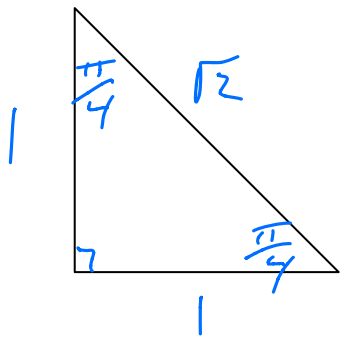
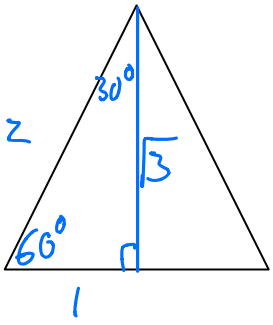
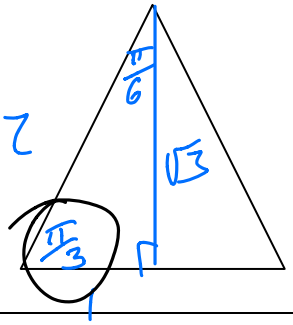
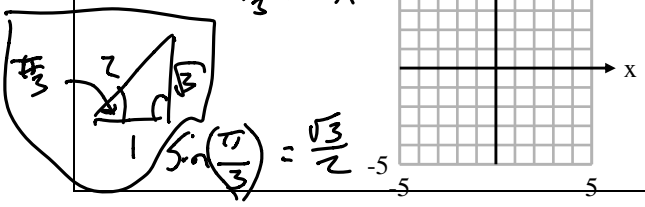
4.5 Special Triangles

Review from Math 10/Pre-Calc 11:	New for Pre-Calc 12
	
	

All of these questions/examples are NO CALCULATOR!
Method to evaluate trigonometric functions with special triangles:

1. Draw the angle in standard position
2. Determine the reference angle
3. Determine the trig ratio (fraction) for the given reference angle
4. Determine sign (positive/negative) depending on what quadrant you are in.

$\sin\left(\frac{\pi}{3}\right)$ Which Δ has a $\frac{\pi}{3}$ in it?

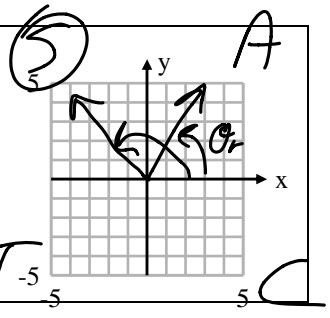


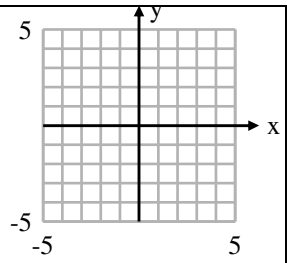
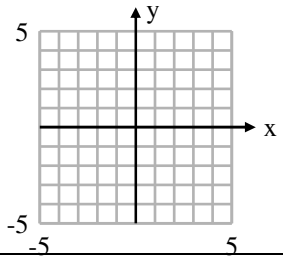
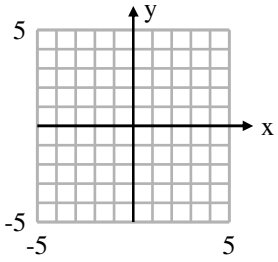
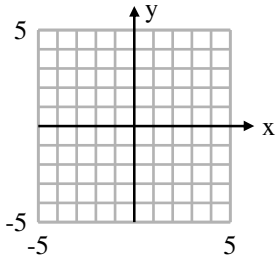
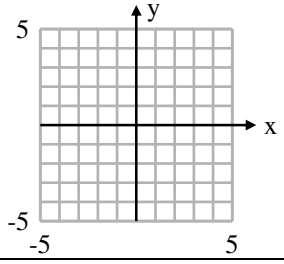
$\cos\left(\frac{2\pi}{3}\right)$ $\theta = \frac{2\pi}{3}$ $\theta_r = \frac{\pi}{3}$

$\cos\left(\frac{\pi}{3}\right) = \frac{1}{2}$

S A
T C

$\therefore \cos\left(\frac{2\pi}{3}\right) = -\frac{1}{2}$



$\tan\left(\frac{7\pi}{6}\right)$ $= \frac{\sqrt{3}}{3}$ 	$\sin\left(\frac{7\pi}{4}\right)$ 
$\tan\left(-\frac{2\pi}{3}\right)$ $= \sqrt{3}$ 	$\cos\left(-\frac{11\pi}{6}\right)$ 
$\sin\left(\frac{9\pi}{4}\right)$ $= \frac{\sqrt{2}}{2}$ 	$\cos\left(-\frac{23\pi}{6}\right)$